

**Notice of Allowability**

Application No.

10/771,849

Applicant(s)

HUGHES ET AL.

Examiner

Abbas I. Abdulsalam

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/21/04.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 2/03/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other \_\_\_\_\_.

  
RICHARD HJERPE

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1-14 are allowed.

### *Reasons for Allowance*

2. The following is an examiner's statement of reasons for allowance:

Brand (USPN 6646572) teaches as shown in Fig. 1 keyboard keys closely spaced, the arrangement of the keyboard being optimized to minimize the total work load which includes minimizing the distance traveled by a single pointer for a particular corpus of input, and saccade (col. 4, lines 4-15).

Mager (USPN 6643371) teaches a portable communication device with a keypad in which frequency of use of each letter is determined with respect to a corpus of usage of portable electronic devices that do not have a complete alphanumeric keyboard, and a complete alphanumeric keyboard being one that allows each letter to have an input key distinct from each other letter (col. 11, lines 7-13).

Ito (USPN 6526401) teaches a string-processing device in which corpus is stored in a corpus-DB portion, and a searching portion searches for positions of occurrences of a part of an input string in the corpus using the series of position numbers. and then a predicting portion, using the result of search performed by the searching portion, predicts a probability of occurrence of a character following the part of the input string (see Fig. 2).

Regarding claim 1, Brand, Mager and Ito do not teach a computer-implemented method comprising: providing an input device that translates a set of user movements into a

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corresponding set of input signals; empirically determining user input action statistics associated with the input device, a set of representative users, and the set of user movements; providing input data corpus information representing patterns of signifiers expected to be communicated by users using the input device; selecting an interface map that maps the set of input signals to a corresponding set of signifiers constituting the patterns of signifiers; and calculating a peak expert input rate from the user input action statistics, input data corpus information, and interface map.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulsalam whose telephone number is 571-272-7685. The examiner can normally be reached on 9:00 from 5:30 P.M. to .The examiner can also be

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas I Abdulsalam  
Examiner  
Art Unit 2629  
June 14, 2007

A handwritten signature in black ink, appearing to read 'R. Hjerpe', is written over a faint, larger signature.

**RICHARD HJERPE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**